



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304
(304) 926-0450
fax: (304) 926-0452

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Friday, February 21, 2020
WELL WORK PERMIT
Horizontal / New Drill

DALE, DAVID DBA DD OIL COMPANY
P. O. BOX 406

SPENCER, WV 252760406

Re: Permit approval for DRILCO 2019 1H PAD 2
47-085-10393-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin
Chief

Operator's Well Number: DRILCO 2019 1H PAD 2
Farm Name: KEITH & PATRICIA WOODARD
U.S. WELL NUMBER: 47-085-10393-00-00
Horizontal New Drill
Date Issued: 2/21/2020

PERMIT CONDITIONS

West Virginia Code §22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code §22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
2. Pursuant to 35 CSR 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
3. Pursuant to 35 CSR 4-19.1.c, if the operator is unable to sample and analyze any water well or spring with one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
5. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours
7. Well work activities shall not constitute a hazard to the safety of persons.
8. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

WW - 2B
(Rev. 8/10)

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

1) Well Operator: DD OIL CO 308509 RITCHIE UNION BURNTHOUSE
DALE, DAVID DD OIL CO Operator ID County District Quadrangle

2) Operator's Well Number: 2019 DRILCO 1H 3) Elevation: 1174

4) Well Type: (a) Oil or Gas
(b) If Gas: Production / Underground Storage
Deep / Shallow

*ck#
1076
12/3/19
\$650.00*

5) Proposed Target Formation(s): WEIR Proposed Target Depth: 2450
6) Proposed Total Depth: 5450 (2450 + 3000H) Feet Formation at Proposed Total Depth: WEIR 2450
7) Approximate fresh water strata depths: NONE
8) Approximate salt water depths: NONE

9) Approximate coal seam depths: NONE

10) Approximate void depths,(coal, Karst, other): NONE

11) Does land contain coal seams tributary to active mine? NONE

12) Describe proposed well work and fracturing methods in detail (attach additional sheets if needed)
BUILD WELL LOCATION AND DRILL 2,450 FEET TO WEIR SANDSTONE.

STARTING AT 1,700 FT, EMPLOY DIRECTIONAL DRILLING TECHNIQUES TO ALLOW FOR A 3,000 FOOT
LATERAL DRILL IN THE WEIR FORMATION WITH ESTIMATED 10-STAGE FRAC

13) **CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE	INTERVALS	CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	Fill -up (Cu. Ft.)
Conductor	20	H40	94 LB	40 FT	40 FT	CTS
Fresh Water	13 3/8	J55	54.5 LB	400 FT	400 FT	CTS
Coal	NONE					
Intermediate	9 5/8	H40	36 LB	1700 FT	1700 FT	CTS
Production	4 1/2	N80	13.3 LB	5450 FT	5450 FT	CTS
Tubing	NONE					
Liners	NONE					

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Packers: Kind: NONE
Sizes: NONE
Depths Set NONE

DEC 04 2019

WW - 2B
(Rev. 8/10)

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

1) Well Operator: DD OIL CO

308509	RITCHIE	UNION	BURNTHOUSE
DALE, DAVID DD OIL CO	Operator ID	County	District
			Quadrangle

2) Operator's Well Number: 2019 DRILCO 1H 3) Elevation: 1174

4) Well Type: (a) Oil or Gas
 (b) If Gas: Production / Underground Storage
 Deep / Shallow

*Chk#
1076
12/3/19
\$65000*

5) Proposed Target Formation(s): WEIR Proposed Target Depth: 2450

6) Proposed Total Depth: 5450 (2450 + 3000H) Feet Formation at Proposed Total Depth: WEIR 2450

7) Approximate fresh water strata depths: NONE

8) Approximate salt water depths: NONE

9) Approximate coal seam depths: NONE

10) Approximate void depths,(coal, Karst, other): NONE

11) Does land contain coal seams tributary to active mine? NONE

*MAG
1/17/20*

12) Describe proposed well work and fracturing methods in detail (attach additional sheets if needed)
 BUILD WELL LOCATION AND DRILL 2,450 FEET TO WEIR SANDSTONE.

STARTING AT 1,700 FT, EMPLOY DIRECTIONAL DRILLING TECHNIQUES TO ALLOW FOR A 3,000 FOOT
 LATERAL DRILL IN THE WEIR FORMATION WITH ESTIMATED 10-STAGE FRAC

13) CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
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Coal	NONE					
Intermediate	9 5/8	H40	36 LB	1700 FT	1700 FT	CTS
Production	4 1/2	N80	13.3 LB	5450 FT	5450 FT	CTS
Tubing	NONE					
Liners	NONE					

Packers: Kind: NONE
 Sizes: NONE
 Depths Set NONE

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Office of Oil and Gas

DEC 04 2019

Department of
Environmental Protection

WW-2A
(Rev. 6-14)

1.) Date: 11/01/2019
2.) Operator's Well Number 2019 DRILCO 1H
State County Permit
3.) API Well No.: 47- 047/085

**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE AND APPLICATION FOR A WELL WORK PERMIT**

4) Surface Owner(s) to be served: 5) (a) Coal Operator
(a) Name KEITH WOODALL Name NONE
Address 509 GRANGER ROAD Address _____
MEDINA, OH 44256
(b) Name Joe Hayes (b) Coal Owner(s) with Declaration
Address 509 GRANGER ROAD Name NONE
MEDINA, OH 44256 Address _____
(c) Name _____ Name _____
Address _____ Address _____
6) Inspector MIKE GOFF (c) Coal Lessee with Declaration
Address _____ Name NONE
Telephone 304-549-9823 Address _____

TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:

OR Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas

Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through ___ on the above named parties by:

- Personal Service (Affidavit attached)
- Certified Mail (Postmarked postal receipt attached)
- Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 35 CSR 4, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.



OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
Kimberly D. Butler
PO Box 414
Glennville, WV 26351
My Commission Expires Oct. 19, 2023

Well Operator DD OIL CO
By: _____
Its: OPERATOR
Address: PO BOX 385
GRANTSVILLE WV 26147
Telephone: 304-354-9516
Email: hugh@drilcooilgas.com

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Subscribed and sworn before me this 1 day of NOVEMBER, 2019 WV Department of Environmental Protection

Kimberly D Butler Notary Public

My Commission Expires 10/19/23

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov

WW-2A Coal Waiver

COAL OPERATOR, OWNER, OR LESSEE WAIVER

County 047-085
Operator DD OIL CO 2019 DRILCO 1V2H DRILLING PROGRAM

Operator's Well Number 2019 DRILCO 2H

INSTRUCTIONS TO COAL OPERATOR, OWNER, OR LESSEE

To the coal operator, owner, or lessee named on page WW2-A. You are hereby notified that any objection you wish to make or are required to make by WV Code 22-6-15, 16 or 17, must be filed with the Chief of the Office of Oil and Gas within fifteen (15) days after the receipt of this application by the Office. Mail objections to:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0499 extension 1654

No Coal

WAIVER

The undersigned coal operator ____ / owner ____ / lessee ____ / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.


FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

Signature

Date

Company Name DD OIL CO
By HUGH D DALE
Its _____
Date _____


Signature _____
Date 11/01/2019

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Environmental Protection

WW-2A1
(Rev. 1/11)

Operator's Well Number 2019 DRILCO 1H

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6, Section 8(d)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
DRILCO OIL & GAS CORP (Hardman Dilling purchased by DRILCO OIL & GAS CORP March 1995 Ritchie County	DD OIL CO PO BOX 406 SPENCER, WV 25276 (see attached Farm Out Assignment)	1/8	BOOK 122 PAGE 50

**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator:
By: Its:

DD OIL CO
HUGH D DALE
OPERATOR



FARM OUT ASSIGNMENT AND ASSOCIATED OIL AND GAS INTERESTS

47-085-10393H

State of West Virginia

County of RITCHIE

Record and Return to:

DRILCO OIL & GAS, INC
P.O. Box 385,
Grantsville, West Virginia, 26147

KNOW ALL MEN BY THESE PRESENTS THAT, the undersigned, **DRILCO OIL & GAS INCORPORATED** a West Virginia corporation, whose chief executive offices are located at 2021 Calhoun Hwy, Grantsville, West Virginia 26147, hereinafter referred to as "**Assignor**", for and in consideration of Ten Dollars (\$10.00) in hand paid and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, does hereby grant, convey, sell, assign, transfer and set over unto Drilco 2018 1H Drilling Program LLC, a West Virginia limited liability corporation, with its offices located at 2021 Calhoun Hwy, Grantsville, West Virginia 26147, ("**Assignee**"), the Property as defined below, as the Property covers and pertains directly to the WELLBORE, AS DEFINED BELOW, AND LAID OUT IN **DRILCO OIL & GAS INCORPORATED**, ONLY OF THE [INSERT WELL NAME] HARDMAN DRILLING (PURCHASED BY DRILCO OIL & GAS) Well, (the "**Well**") from a surface locatn on [INSERT SURFACE LOCATION] DRILCO OIL & GAS leased to Assignor by [INSERT MINERAL NAME] HARDMAN DRILLING (PURCHASED BY DRILCO OIL & GAS) under the lease(s) described below (collectively, the "**Lease(s)**"), and all production of oil, gas, and other minerals from the Wellbore, penetrated by the drill bit for this program, EXCEPTING AND RESERVING unto Assignor all of Assignor's right, title, and interest in the property otherwise relating to or in any manner pertaining to the lands which are the subject of the oil and gas Leases.

The term "**Property**" means all rights, title, and oil and gas leaseholds and interests in and to: (a) the wellbore of the well from the surface to its actual depth, *provided that*, such total depth shall not be deeper than 6,000 feet from the surface (the "**Wellbore**"); and (b) the exclusive right to penetrate into the subsurface with the wellbore in search of oil, natural gas, and other petroleum hydrocarbons; (c) all of the oil, gas, and/or minerals produced from the well so long as its total depth is no deeper than 6,000 feet from the surface including with limitation presently existing oil, and casinghead gas, natural gas and /or other hydrocarbons in the wellbore; TO HAVE AND TO HOLD the same unto the same terms and provisions contained in said leases, contracts and assignments relating thereto and to all laws, rules, and regulations of all governmental bodies and agencies having jurisdiction thereof, all of which Assignees herby assume insofar as same are applicable to the interest herby assigned, The term "**Leases(s)**" means DRILCO OIL & GAS CORP/ADA HALL LEASE.

This Assignment is being entered into and pursuant to and is subject to the terms, conditions, and reservations set forth in that certain **DRILCO OIL & GAS INCORPORATED** by and between Assignor and Assignee dated as of [INSERT AGREEMENT DATE] MARCH 1995. This Assignment is made without warranty of title. The provisions hereof shall be construed as covenants running with the respective Leases and rights assigned hereunder, and shall be binding upon the respective successors and assigns of Assignor and Assignee.

ASSIGNOR: **DRILCO OIL & GAS, INC**
Federal ID #: 83-2371247

Physical Address: 2021 Calhoun Hwy, Grantsville WV 26147

By: [Signature]
Hugh D. Dale, Managing Partner

ASSIGNEE:

Address:

DD OIL COMPANY RECEIVED
PO BOX 406 Office of Oil and Gas
SPENCER, WV 25276 DEC 04 2019
WV Department of
Environmental Protection

NOTARY ACKNOWLEDGEMENT

State of WV, COUNTY OF Calhoun

The foregoing instrument was acknowledged before me on 11/7/2019 (date)

by Kimberly D Butler (name Notary Public)

Printed name Kimberly D Butler

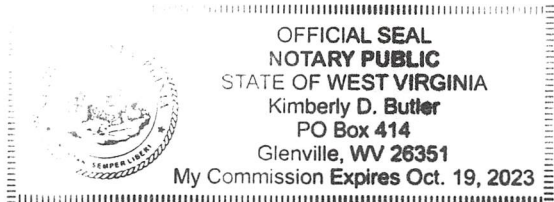
My commission expires 10.19.2023

Federal ID/SSN : 55-0765849

By: _____

DAVID DALE

Name (please print) _____



WW-2B1
(5-12)

Well No. 2019 DRILCO 1H

West Virginia Department of Environmental Protection
Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

Be advised, you have the right to sample and analyze any water supply at your own expense.

Listed below is the laboratory chosen by operator to perform analysis, and contactor chosen to collect sample.

Certified Laboratory Name NO WATER SOURCES WITHIN 2,000 FEET
Sampling Contractor _____

Well Operator DD OIL CO
Address PO BOX 385
GRANTSVILLE, WV 26147
Telephone 304-354-9516p

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underling which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site, the Chief may require the operator to test wells up to 2000 feet from the proposed site.

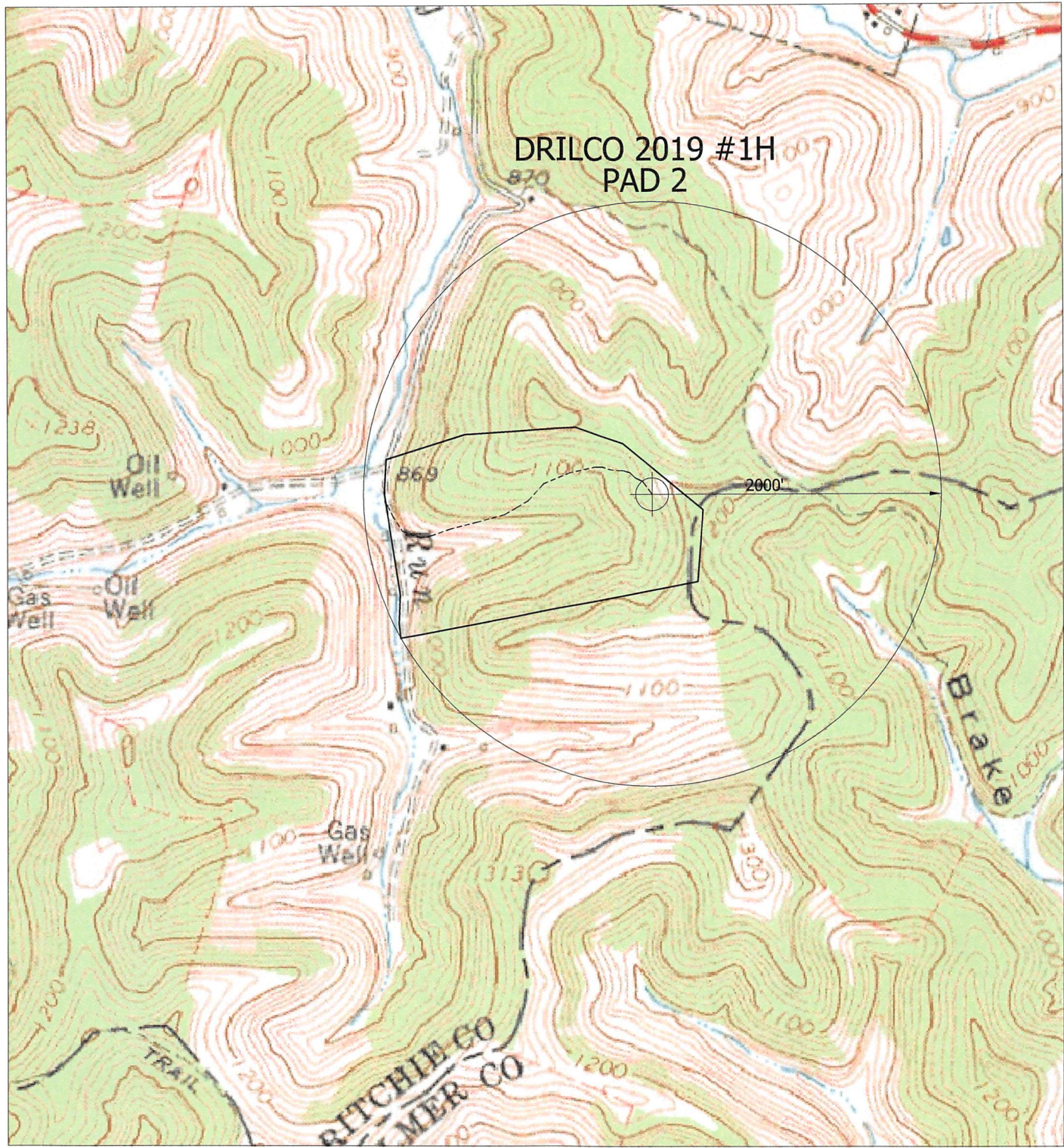
* No water sources within 2,000 ft.
See addendum #1 W-9

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D D OIL COMPANY DRILCO 2019 #1H PAD 2 WATER



<p>HUPP Surveying & Mapping</p> <p>P.O. BOX 647 GRANTSVILLE, WV 26147 PH: (304)354-7035 E-MAIL: hupp@frontiernet.net</p>	<p>1" = 1000' AUBURN Quad</p>	<p>D D OIL COMPANY P.O. BOX 382 GRANTSVILLE, WV 26147</p>
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WW-9
(5/16)

API Number 47 - 085 -
Operator's Well No. 2019 DRILCO IH

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name DD OIL CO OP Code _____

Watershed (HUC 10) BIG RUN Quadrangle BURNTHOUSE

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a pit be used? Yes No

If so, please describe anticipated pit waste: FRESH WATER AND DRILL CUTTINGS

Will a synthetic liner be used in the pit? Yes No If so, what ml.? 20 MIL

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

Will closed loop system be used? If so, describe: NO

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. AIR, Surfactant

-If oil based, what type? Synthetic, petroleum, etc. NONE

Additives to be used in drilling medium? NONE

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. LEAVE IN PIT

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) LIME AND SAWDUST on cement.

-Landfill or offsite name/permit number? NONE

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 1, 2016, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

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Company Official Signature [Signature]

Company Official (Typed Name) HUGH D DALE

Company Official Title MANAGING MEMBER

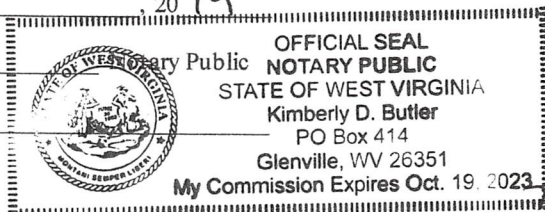
DEC 04 2019

WV Department of
Environmental Protection

Subscribed and sworn before me this 7th day of November, 2019

Kimberly D Butler

My commission expires 10.19.23



Proposed Revegetation Treatment: Acres Disturbed LESS THAN 1 ACRE Prevegetation pH

Lime _____ Tons/acre or to correct to pH

Fertilizer type 10-20-20

Fertilizer amount 500 _____ lbs/acre

Mulch 2 _____ Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type _____ lbs/acre

Seed Type _____ lbs/acre

CONTRACTOR'S MIX 40 LB

CONTRACTOR'S MIX 40 LB

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Michael Doff

Comments: Preseed & mulch any disturbed areas. Remove all trees larger than 6" diameter from brush windrows.

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Department of
Energy and Natural Resources

Title: Oil & Gas Inspector Date: 1/17/20

Field Reviewed? Yes No

Proposed Revegetation Treatment: Acres Disturbed LESS THAN 1 ACRE Prevegetation pH

Lime Tons/acre or to correct to pH

Fertilizer type 10-20-20

Fertilizer amount 500 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type lbs/acre

Seed Type lbs/acre

CONTRACTOR'S MIX 40 LB

CONTRACTOR'S MIX 40 LB

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by:

Comments:

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DEC 04 2019

WV Department of Environmental Protection

Title: Date:

Field Reviewed? () Yes () No

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
GROUNDWATER PROTECTION PLAN

Operator Name: DD OIL CO 2019 DRILCO 1V2H DRILLING PROGRAMWatershed (HUC 10): BIG RUNQuad: BURNTHOUSEFarm Name: KEITH WOODALL

1. List the procedures used for the treatment and discharge of fluids. Include a list of all operations that could contaminate the groundwater.

CUTTINGS WILL BE DISCHARGED INTO 20 MIL LINED PIT(S). DUST SUPPRESSION WILL BE USED AND RE-USED DURING DRILLING PROCESS. SOLIDS GENERATED FROM WELL WILL BE DRIED AND SOLIDIFIED, THEN BACK-FILLED ON SITE. SITE WILL BE RECLAIMED TO WVDEP REGULATIONS.

PITS CONSTRUCTED WITH INADEQUATE VOLUME, OR IMPROPER PIT LINER COULD CONTAMINATE THE GROUNDWATER.

2. Describe procedures and equipment used to protect groundwater quality from the list of potential contaminant sources above.

PIT(S) LINED WITH 20 MIL PLASTIC,
DIKES CONSTRUCTED TO CONTAIN EFFLUENT FROM DRILLING PROCESS.

3. List the closest water body, distance to closest water body, and distance from closest Well Head Protection Area to the discharge area.

BIG RUN IS THE CLOSEST BODY OF WATER APPROXIMATELY 2,000 FEET FROM WELL SITE.

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4. Summarize all activities at your facility that are already regulated for groundwater protection.

ALL PITS WILL HAVE 20 MIL LINER AND CONSTRUCTED WITH ADEQUATE VOLUME TO CONTAIN CUTTINGS AND OTHER EFFLUENT GENERATED FROM DRILLING PROCESS.

WATER TANKS WILL BE PLACED ON SITE TO HOLD EXCESS WATER/SALT WATER GENERATED BY WELL.

5. Discuss any existing groundwater quality data for your facility or an adjacent property.

NO GROUNDWATER ISSUES KNOWN.
CLOSEST WATER WELL IS APPROXIMATELY 2,000 FEET AWAY.

6. Provide a statement that no waste material will be used for deicing or fill material on the property.

NO WASTE MATERIAL WILL BE USED FOR FILL MATERIAL ON THE PROPERTY.

7. Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination.

DRILLING CONTRACTOR IS DIRECTED TO ONLY USE PIT(S) AS NECESSARY.
BEFORE ANY DISCHARGE, ALL FLUIDS IN THE PIT WILL BE TESTED PRIOR TO LAND APPLICATION (PIT TREATING COMPANY). FLUIDS MAY BE HAULED TO OIL WELL.
SOLIDS TO BE LEFT IN PIT AND BURIED ON SITE.
** while discharging treated pit water, precautions will be taken to keep water flow at a low velocity and keep from pooling.*

8. Provide provisions and frequency for inspections of all GPP elements and equipment.

INSPECTIONS WILL OCCUR DAILY DURING DRILLING PROCESS, AND ON WEEKLY BASIS UNTIL PIT CLOSURE.

RECEIVED
Office of Oil and Gas

Signature: _____

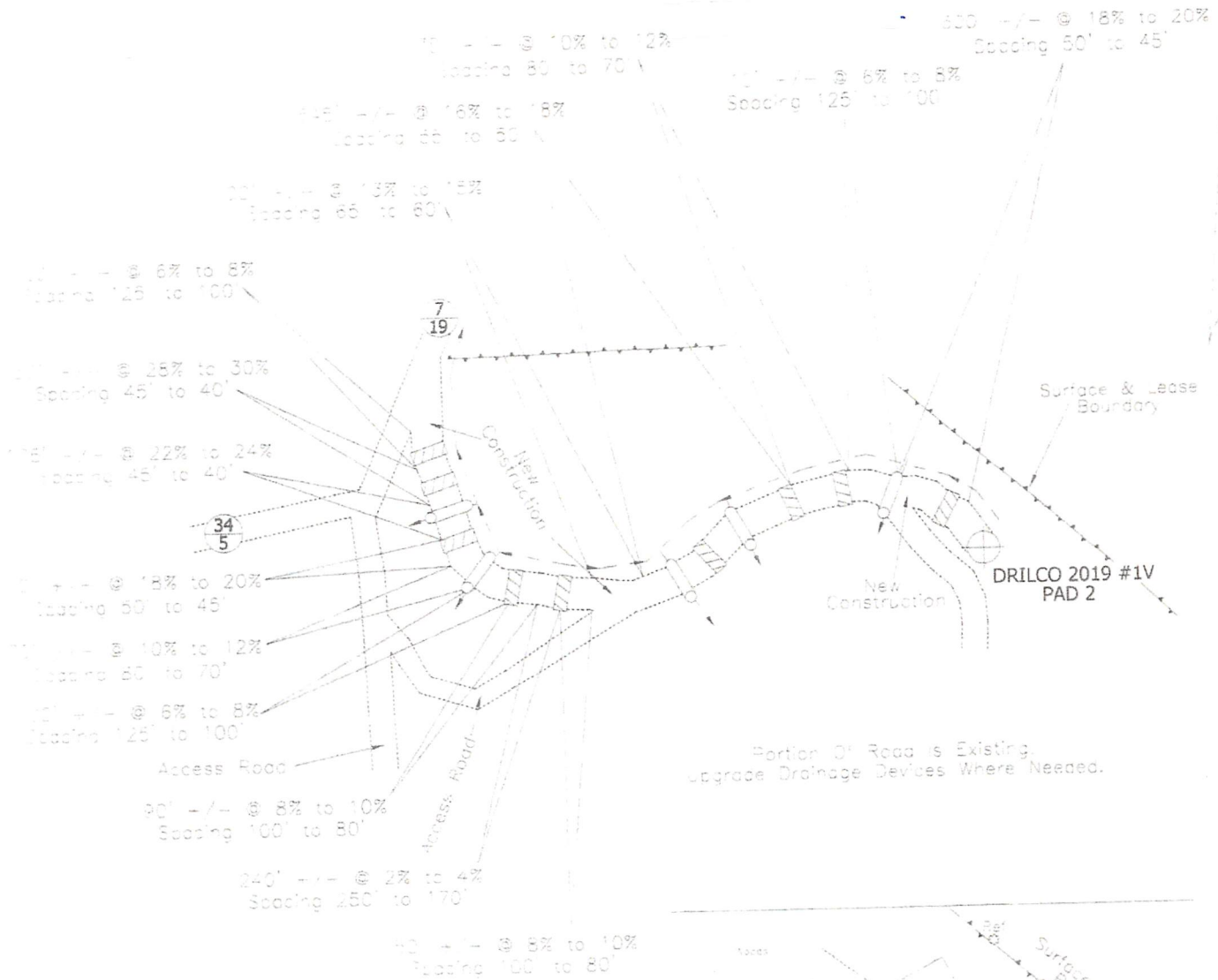
DEC 04 2019

Date: _____

WV Department of
Environmental Protection

D D OIL COMPANY DRILCO 2019 #1H PAD 2

Form W-9



Portion of Road is Existing.
Upgrade Drainage Devices Where Needed.

Install Minimum 12" Culverts

ROADS SHOWN HEREIN ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH DEP OIL AND GAS BMP MANUAL. EXISTING AT CONTRACTOR'S RISK. SHALL BE MAINTAINED IN ACCORDANCE WITH ALL LOCAL REGULATIONS. SEPARATE PERMITS MAY BE REQUIRED BY THE DEP.

SEDIMENT BASINS, TRAPS AND APPROPRIATE EROSION CONTROL BARRIERS ARE TO BE INSTALLED AT ALL CULVERT AND DRAIN INLETS AND OUTLETS AS REQUIRED. THIS MAY BE OIL AND GAS BMP MANUAL. FIELD CONDITIONS (HIGH WINDS, ANCHORAGE MAY PROHIBIT INLET TRAPS BEING INSTALLED. WHEN THESE CONDITIONS OCCUR, ADDITIONAL EROSION CONTROL MEASURES SHALL BE EVALUATED AND UTILIZED.

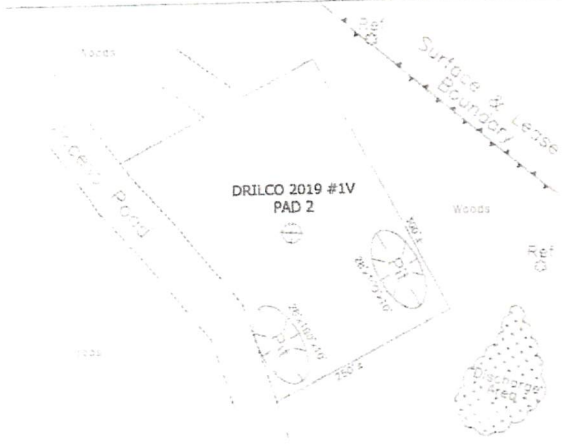
CONTRACTORS ARE RESPONSIBLE FOR NOTIFYING THE OPERATOR AND INSPECTOR PRIOR TO ANY DEVIATION FROM THIS PLAN.

CONTRACTORS/COMPANY ARE RESPONSIBLE FOR LOCATING UTILITIES WHETHER SHOWN ON THIS PLAN OR NOT.

TEMPORARILY SEED AND MULCH ALL SLORES AFTER CONSTRUCTION OF LOCATION.

DO NOT STACK ALL TIMBER ABOVE 4 INCHES IN DIAMETER AND THICKER.

USE BRUSH BELT LOCATION FOR SEDIMENT CONTROL.



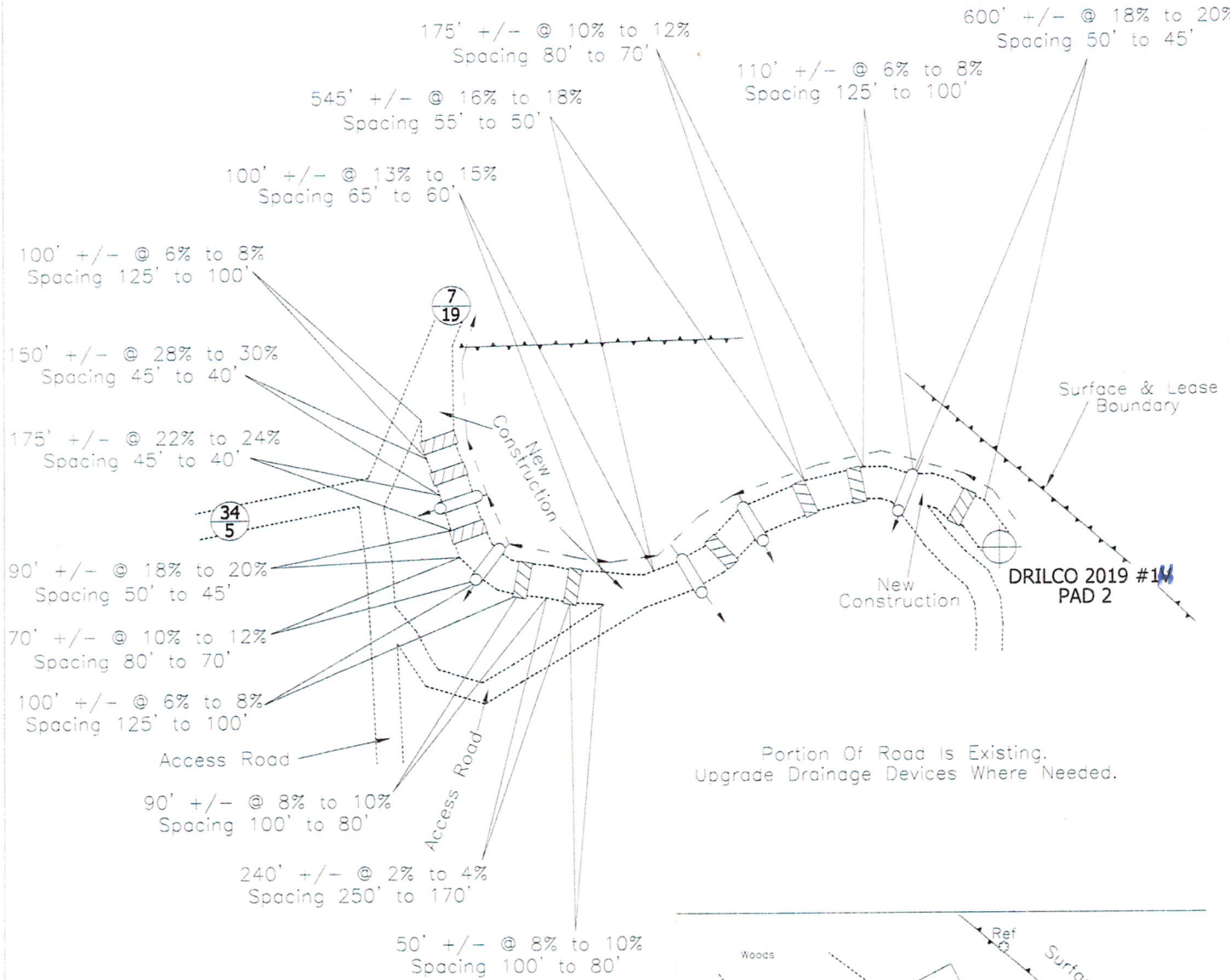
Drawing Not To Scale · NORTH

Michael Goff
1 / 17 / 20

HUPP Surveying & Mapping	Drafted BY:	Date Drafted:	Job Number:
P.O. BOX 847 GRANTSVILLE, WV 26147 PH: (304) 354-7035 E-MAIL: hupp@frontiernet.net	DB	[REDACTED]	W20182606


D D OIL COMPANY DRILCO 2019 #1H PAD 2

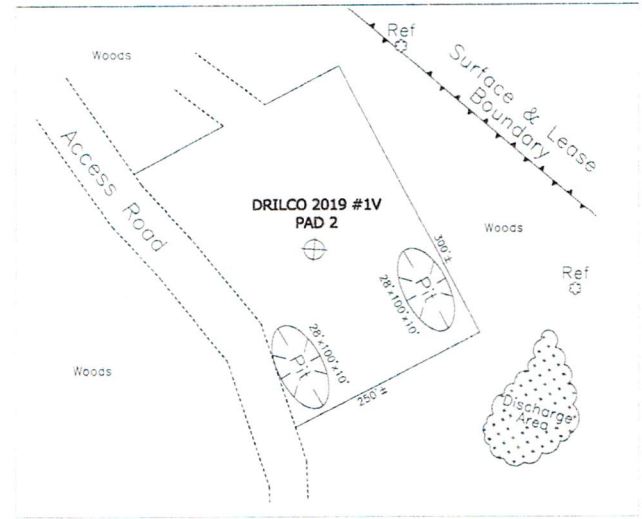
Form W-9



Drawing Not To Scale NORTH

Portion Of Road Is Existing.
Upgrade Drainage Devices Where Needed.

-  Install Minimum 12" Culvert
- ALL ROADS SHOWN HEREON ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH DEP OIL AND GAS BMP MANUAL ENTRANCES AT COUNTY/STATE ROADS SHALL BE MAINTAINED IN ACCORDANCE WITH WV DOT REGULATIONS. SEPARATE PERMITS MAY BE REQUIRED BY THE DOT.
- SEDIMENT BASINS, TRAPS AND APPROPRIATE EROSION CONTROL BARRIERS ARE TO BE CONSTRUCTED AT ALL CULVERT AND CROSS DRAIN INLETS AND OUTLETS AS REQUIRED IN THE WV DEP OIL AND GAS BMP MANUAL. FIELD CONDITIONS (ROCK OUTCROPS AND BEDROCK) MAY PREVENT INLET TRAPS BEING INSTALLED. WHEN THESE CONDITIONS EXIST, ADDITIONAL EROSION CONTROL MEASURES SHALL BE EVALUATED AND UTILIZED.
- EARTHWORK CONTRACTORS ARE RESPONSIBLE FOR NOTIFYING TO THE OPERATOR AND INSPECTOR PRIOR TO ANY DEVIATION FROM THIS PLAN.
- CONTRACTORS/COMPANY ARE RESPONSIBLE FOR LOCATING UTILITIES WHETHER SHOWN ON THIS PLAN OR NOT.
- TEMPORARILY SEED AND MULCH ALL SLOPES AFTER CONSTRUCTION OF LOCATION.
- CUT AND STACK ALL TIMBER ABOVE 6-INCHES IN DIAMETER AND THICKER.
- STACK BRUSH BELOW LOCATION FOR SEDIMENT CONTROL.



HUPP Surveying & Mapping

Drafted BY:

Date Drafted:

Job Number:

P.O. BOX 647 GRANTSVILLE, WV 26147
PH:(304)354-7035 E-MAIL: hupp@frontiernet.net

DB

01/13/20

W20182606

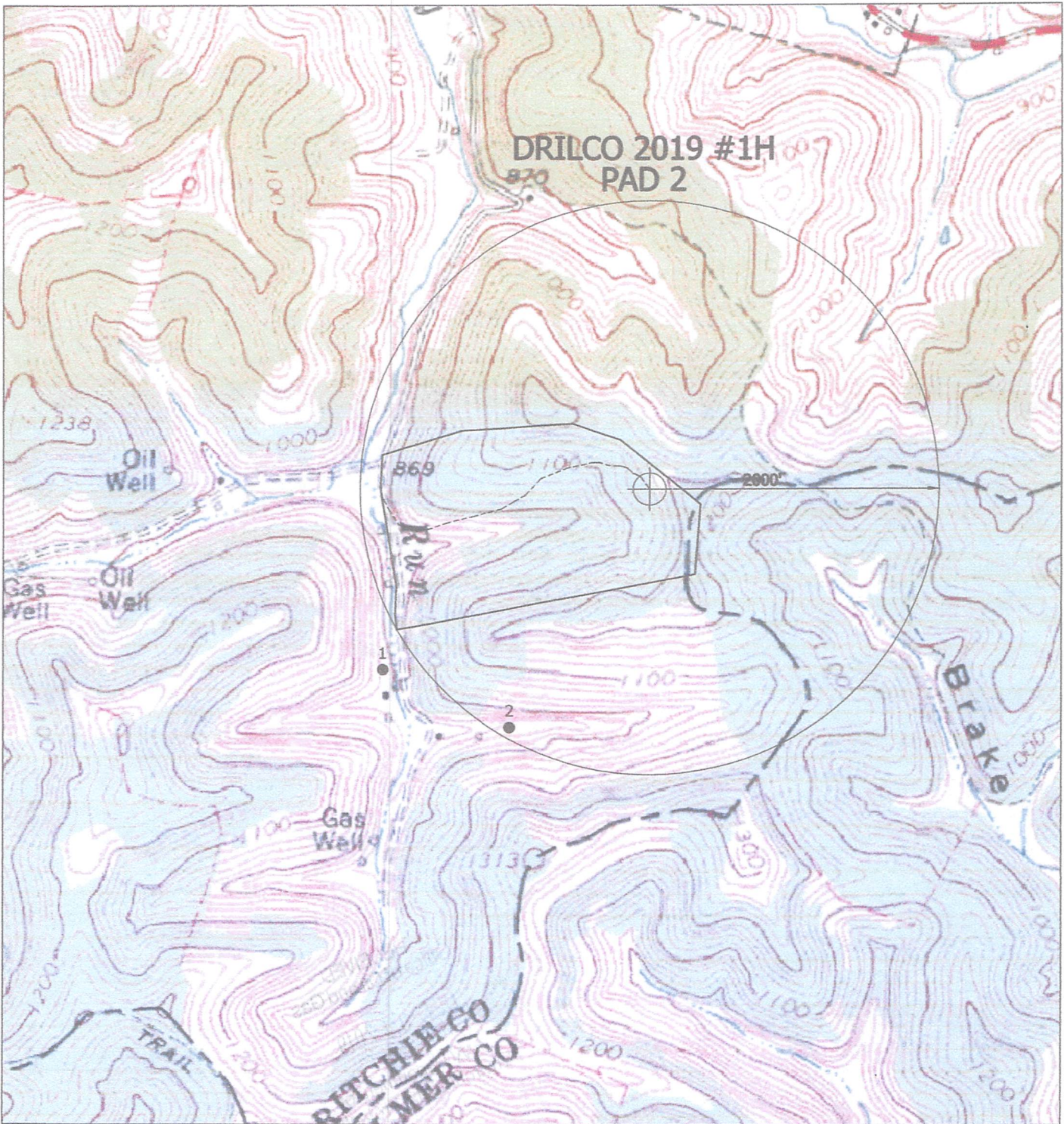
Form W-9

D D OIL COMPANY

Page 1 of 1

#1

DRILCO 2019 #1H PAD 2 WATER



NORTH

HUPP Surveying & Mapping

P.O. BOX 647 GRANTSVILLE, WV 26147
PH: (304)354-7035 E-MAIL: hupp@frontiernet.net

1" = 1000'
AUBURN Quad

D D OIL COMPANY
P.O. BOX 382
GRANTSVILLE, WV 26147

DRILCO 2019 #1H PAD 2

**DRILCO 2019 #1H PAD 2
BOTTOM HOLE**

STATE PLANE
COORDINATES
(NORTH ZONE-NAD 27)
(N) 215413
(E) 1611912

L & L DECIMAL (NAD 27)
39.08333
80.86715

UTM (NAD 83) METERS
4326042
511505

**DRILCO 2019 #1H PAD 2
LANDING POINT**

STATE PLANE
COORDINATES
(NORTH ZONE-NAD 27)
(N) 215804
(E) 1614695

L & L DECIMAL (NAD 27)
39.08451
80.85737

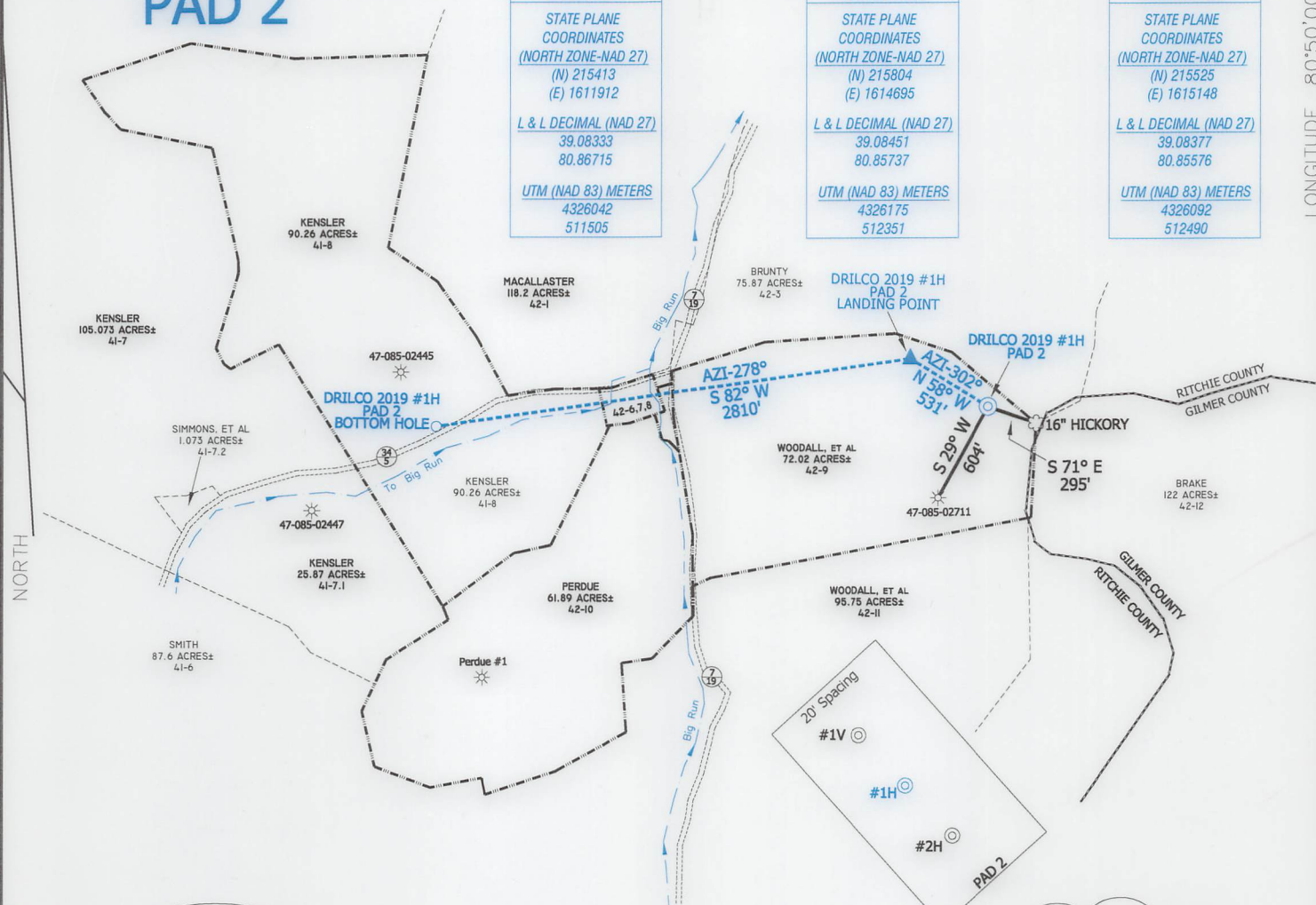
UTM (NAD 83) METERS
4326175
512351

**DRILCO 2019 #1H PAD 2
SURFACE HOLE**

STATE PLANE
COORDINATES
(NORTH ZONE-NAD 27)
(N) 215525
(E) 1615148

L & L DECIMAL (NAD 27)
39.08377
80.85576

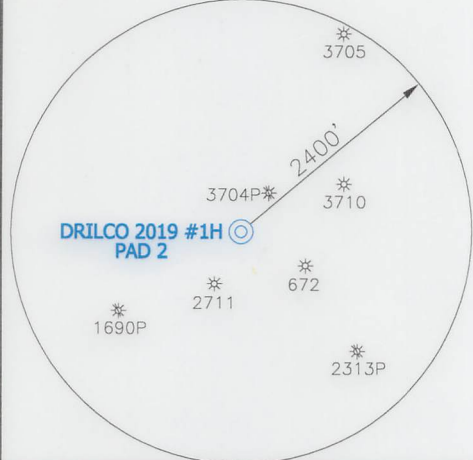
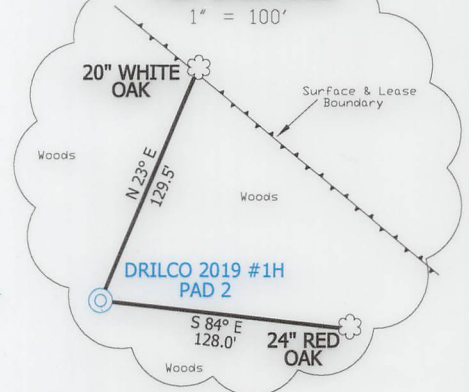
UTM (NAD 83) METERS
4326092
512490



NOTES ON SURVEY

1. NO DWELLINGS WITHIN 625' WERE FOUND.
2. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' WERE FOUND. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WV NORTH ZONE NAD '27.
3. WELL LAT./LONG. ESTABLISHED BY DGPS(SUB-METER GRADE).
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF RITCHIE COUNTY IN JUNE, 2019 AND INFORMATION PROVIDED BY D D OIL COMPANY.
5. WELLS SHOWN ARE TAKEN FROM RECORDS OF WVDEP.

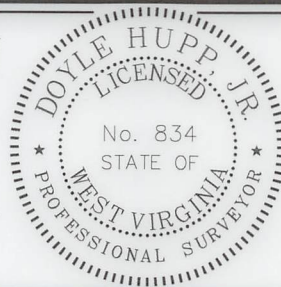
REFERENCES



I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

P.S.
834

[Signature]
HUPP Surveying & Mapping
 P.O. Box 647 Grantsville, WV 26147
 (304) 354-7035 EMAIL: hupp@frontiernet.net



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
 DATE SEPTEMBER 24, 20 19
 OPERATORS WELL NO. DRILCO 2019 #1H PAD 2
 API WELL NO. 47-085-10393H
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. W2606 (BK94-5)
 PROVEN SOURCE OF ELEVATION DGPS (SUB-METER) SCALE 1" = 1000'

STATE OF WEST VIRGINIA
 DIVISION OF ENVIRONMENTAL PROTECTION
 OFFICE OF OIL AND GAS



WELL TYPE : OIL GAS LIQUID INJECTION WASTE DISPOSAL IF "GAS" PRODUCTION STORAGE DEEP SHALLOW

LOCATION :
 ELEVATION 1,174' WATERSHED BIG RUN
 DISTRICT UNION COUNTY RITCHIE QUADRANGLE AUBURN 7.5'

SURFACE OWNER KEITH & PATRICIA WOODALL, et al ACREAGE 72.02±
 ROYALTY OWNER C.C. COTRILL HEIRS, et al LEASE ACREAGE 163.78±

PROPOSED WORK : LEASE NO. _____
 DRILL CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE PLUG OFF OLD FORMATION _____ PERFORATE NEW FORMATION _____ PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____ OTHER _____
 PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION WEIR
 ESTIMATED DEPTH TVD-2,450' MD-5,790'

WELL OPERATOR D D OIL COMPANY DESIGNATED AGENT HUGH DALE
 ADDRESS P.O. BOX 385 GRANTSVILLE, WV 26147 ADDRESS P.O. BOX 385 GRANTSVILLE, WV 26147

LONGITUDE 80°50'00" COUNTY NAME PERMIT